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WALTER PERRY

Education in the XXIst Century



Leadership

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Education in the XXIst Century



Leadership

WALTER PERRY

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Photo courtesy of the British Broadcasting Corporation

Walter Laing Macdonald Perry, formerly Professor of Pharmacology at the University of Edinburgh, became founding Vice Chancellor (President) of The Open University which he headed from 1968 to 1981. In 1979, he was given life peerage as Lord Perry of Walton. He is pictured above with Prince Charles.

WALTER PERRY (Lord Perry of Walton)

*Education in the 21st Century**

I have given, over the last 20 years, a lot of talks about the changing patterns of education. Much of what I have said on these occasions was orientated towards the situation in the United Kingdom, and mostly I was examining contemporary trends. Looking forwards to the next century, still a decade away, involves extrapolating the contemporary trends and changes that are already visible, and extrapolation is always a risky business. The dramatic changes of the last 21 months in Eastern Europe and more recently in the Middle East have had and will have such profound effects that education will inevitably be affected by them, directly or indirectly. So I shall begin making certain assumptions, namely:

1. There will be no nuclear holocaust.
2. World food production will balance world population.
3. There will be no pandemics of pestilence.
4. There will be adequate energy for all nations.
5. All nations, including the developing nations, will achieve a balanced economy.

Having made those assumptions, I doubt that they are valid. Despite the improvements in Eastern Europe, I am pessimistic. AIDs, the greenhouse effect, the Middle East and the continuing population explosion still leave me feeling that Malthus was probably right. We will end with restoration of balance through the Four Horsemen of the Apocalypse: plague, famine, war, and death.

But if we are *optimistic* what will be the shape of education? I shall look first at the major influences that will affect education and end by painting my picture of what it will be like in 2050.

Changing the Objectives of Education

The future shape of education will be affected by changes that are already occurring in the accepted objectives of education itself, changes that I expect to continue. Before starting off I would like, however, to tell you just a little about how education developed in my own country.

*Lecture given in Bloomington for the Indiana University Institute and Society for Advanced Study on September 21, 1990 and subsequently at Indiana University Southeast in New Albany on October 17, 1990 and at Indiana University East in Richmond on October 22, 1990. A videotaped interview with Lord Perry is available upon request to the librarians on the eight campuses of Indiana University or to the Institute office in Bloomington.

It is a truly remarkable phenomenon that, in a small offshore island of Europe, there should have emerged two such fundamentally different education systems as those in England on the one hand and Scotland on the other. In the England of 1800 there were but two universities. Access to secondary education and to the universities was restricted *de facto* to the children of the aristocracy or of the wealthy merchants in an educational system that was just about as elitist as it could be. Yet only just across the border to the North there had grown up an educational system as democratic as any that the world knew. There were already 4 universities for a population only a tenth that of England. Any lad of parts from the poorest croft would be given his chance of a university education at whatever cost in the sacrifices of his parents and siblings. In St. Andrews University, there was still, when I was an undergraduate, a university holiday in the middle of the Autumn Term called "Meal Monday." It had been a very necessary holiday providing for the student sons of the crofters a long weekend in order to travel home to fetch another bag of meal and a barrel of herring upon which to subsist for the remaining weeks of term. Such a holiday would have had no meaning in Oxford.

Why should the systems differ so? I am not sufficient of a historian to answer with confidence, but it seems to me that two factors must have played a part. The first is the difference between the Episcopalian Church and the Protestant one. The episcopal system of archbishop, bishop and priest emphasizes the hierarchy; protestantism stresses individuality. Then, too, the Protestants much more than the Anglicans emphasized the value of universal literacy. Calvin himself was one of its first advocates. They also stressed the merits of suffering and perhaps this encouraged poor families to accept the sacrifices entailed in sending a child to college. Second, the feudal system never reached up into the Scottish glens. There never had been a master/serf relationship. Clan society regarded the Chieftain as no more than *primus inter pares*. There would not, therefore, be any deep-rooted feeling that education - or indeed anything else - was exclusively for "them," not for "us." Yet this feeling is, I think, still so prevalent in England that, even when new opportunities are offered within the financial reach of everyone, many will reject the chance because they instinctively accept the feeling.

The English system followed the teaching not of Calvin but of Erasmus who stressed the advantages of a liberal education which he defined as "classical literacy studies leading to an intelligent interpretation of texts." He considered that such education should be offered to the elite, the masses being required only to acquire skill in an occupation.

In England, too, these traditions have been bred not only to a 'them and us' attitude towards education, but also a structure of education that, in my view, is one root cause of our apparent inability to climb out of our current economic

and social troubles. The Universities have developed, especially in more recent decades, a positive pride in their achievement of satisfactorily completing a specialized honours degree program in three years of study and with a success rate that reaches almost 90%. This is a far higher success rate than is achieved as an average in any other country including Scotland. All of them or almost all of them also require 4 years to complete a similar range of studies.

At first sight it looks like a record for legitimate pride. *But it isn't*. It is purchased at an appalling cost. In the first place it denies entry to many who could benefit. Very much worse, the three years honours degree program has been allowed, because of the power of the universities, so to distort secondary education as to lead to the dreadful "A" level examination. This has imposed upon all secondary school pupils a curriculum that — while it *does* produce scholars who *can* satisfactorily complete the 3 years honor degree program albeit very narrow scholars, illiterate scientists and innumerate humanists — denies to all non-scholars any chance of a liberal general education. All must select two or three narrow special subjects and from the age of 16 - and often even earlier - virtually abandon all other studies. Furthermore, the earlier curriculum, although broader in scope, is also tailored to lead into the later specialization. It is difficult to imagine a worse way of designing secondary education for the whole population.

I can sum this up then by saying that in England there was, and for many teachers still is, a belief that the only true worthwhile education was study in depth. The skeptics called it "knowing more and more about the less." I am glad to be able to say that things have begun to change. The new Education Reform Act broadens education - and defines a core curriculum - for children up to 16. But the government did not have the nerve to abolish "A" levels as well. So change is very, very slow. I hope it is sure.

In Scotland, as in this country, the school curriculum is much broader and much more sensible. It aims not just at the scholar. Its main objective is to fit citizens for life in modern society. The needs of the members of a modern society have been described as:

- (i) The need to earn a living — which demands that education should provide some sort of vocational training.
- (ii) The need to play a role in society — which demands that education should provide some sort of instruction in the customs and structure of society.
- (iii) The need to enjoy leisure — which demands that education should develop the creative talents, the skills of the individual, and the ability to enjoy literature and music.

Theorists vary in the extent to which they stress these various needs and vary even more in how they would satisfy them through the educational system. It seems to me, however, that there is a gap in all this theory, a gap that is the root cause of many of our current problems, a gap that is extremely difficult to fill. There is seldom any mention of educating people to have values. Indeed we have, as a society, torn down and abandoned all the values that formerly provided the principles on which human behaviour in societies was founded. We have, in the Western World, abandoned religious faith except where we have embraced Marxism; we have largely destroyed respect for age and experience in our concentration on the "rights" of the young; we have eschewed the concepts of empire and of national pride. We have to a large extent disrupted the values of the family as a unit.

I am not arguing that we were wrong to abandon all these values; I am, however, arguing strongly that we were wrong to abandon them unless we had something else to put in their place. Those of us, and I was one, who, as adults, embraced humanism as a basis for an ethical code — the Mr. Do-as-you-would-be-done-to-philosophy — failed to appreciate that it is a sophisticated concept which cannot easily be taught to young children. It has neither carrot nor whip to attract or compel acceptance. It is essentially based on self-discipline and, before it is accepted as a belief, there is no basis for any imposed discipline.

I am quite certain that, intrinsically, all human beings are wholly selfish - the single exception being the unselfishness of parents towards their own children, which is based on the reproductive instinct. Thus to overcome their intrinsic selfishness, people either need a belief that they will benefit in this life or the next, or they need a healthy fear that, if they don't overcome it, they will suffer a penalty in this life or next.

I have no belief whatsoever in any intrinsic human altruism. This is why I believe that Marxism, which promises nothing as a reward and is based wholly on self-discipline, calls for qualities of unselfishness, of "goodness" that, in the long run, cannot be sustained by human beings; consequently it is ultimately bound to fail as a basis for human societies.

To instil values is probably best tackled by reading and discussing some of the great philosophers and by studies of comparative religion showing how the accepted moral laws have evolved and why they are so necessary. I do not see much sign of such studies in the UK. I do think, however, that the future pattern of education will have to include as one of its objectives to instil a sense of values, moral and aesthetic.

Another objective of education that could command general agreement is that it should provide equality of opportunity to all, thus allowing all individuals to take education as far as their intellectual capacity permits. That intellectual capacity varies from individual to individual is not in doubt. There are great

arguments about whether the variability is genetically determined or wholly due to environmental factors.

As educationists we can, whatever we believe on that head, do nothing to modify genetic determinants; but we can and should do all we can to try to make the environment of development approach the ideal. The problem is of course to determine what is that ideal environment. Most people would agree that, whatever it may be, it should be made available, as far as possible, to everyone. In other words, we should aim not only at an ideal environment; we should also aim at equality of opportunity. Both are unachievable. One cannot compensate for the differences between parents in providing opportunities for their children unless one wholly eliminates the family unit; and even then one must replace it by the creche where the qualities of those adults chosen to look after the children will vary as greatly as do the qualities of parents. But the realization that equality of opportunity is unachievable does not remove our responsibility for trying to achieve it as far as possible.

No one knows just how these objectives of education will be modified during the next century. But it is certain that changes will take place and that they will modify the shape of the educational systems of the world.

Let me turn to the second major influence on those systems, namely the communications explosion.

The Communications Explosion

We are, I believe, in the middle of changes as great as those that followed from Gutenberg's invention of the printing press in the middle of the fifteenth century and its introduction in England by Caxton. It was no accident that the last decades of that century saw the birth and development on the one hand of numerous educational institutions and on the other of humanistic studies in place of purely devotional ones. Such a cultural expansion could not have occurred if all books had to be laboriously produced as manuscripts.

The printed word remained the major method of communication until the 20th century. Since then we have had a second set of changes based on electrical and electronic communications technology. This communications revolution is still in progress. It has had two major effects on education.

The communications explosion led first to a great increase in the demand for continuing education, and to many new potential ways of offering education. Until the arrival of telegraphy and air transport the world was a very large one. News, even of events of cataclysmic importance, could take days, weeks, even months to become known. The advent of radio and more especially of television added drama to the immediacy of news. News of a disaster - famine, flood or pestilence - formerly arrived too late for any effective help to be made available. Thus the news might induce pity but did not induce concern. Nowadays we not

only know of disaster as it happens, we are also presented with vivid pictures in full colour within a matter of hours. All over the world this new immediate and dramatic awareness of global events and problems has led to public concern. This, in turn, has led millions of people to realize that they lack the ability to participate in solving the problems since they possess neither the background knowledge to comprehend the nature of many global problems nor the power to help solve them even if they had the knowledge.

I believe that this demand for further education and for participation in governmental decision-making is one clear result of the communications explosion. The new demand, stemming from concern, is only very partially satisfied. I believe that there is real danger in our failure to meet that demand, in that, if it is not satisfied, it may be suppressed by the incredible superficiality of the explanations offered by the mass media. Let me explain what I mean. Argument is rarely to be found on television. It is all too easy for one person to make an outrageous assertion. To counter that assertion by reasoned argument could take quite a long time — and that is never available. Thus an opponent can only fall back on a rapid but equally outrageous counter-assertion. There is never time for discussion of any issue in depth. Superficiality is the virtually invariable outcome. The seeker after understanding may thus come to the erroneous conclusion that there *is* no understanding, and the concern bred in him by his new awareness may, therefore, be suppressed.

There can have been no more clear-cut evidence of this superficiality, and the way in which the media pander to it, than has been shown in recent general elections in the UK and presidential elections in the USA.

The popular novelist, Robert Ludlum, wrote a special introduction to the new edition in 1988 of his book *Trevaayne* which had originally appeared twenty years earlier. In his introduction he used words each of which had been dipped in venom. He wrote:

As I write, the United States of America has just witnessed two of the most disgraceful, debasing, inept, disingenuous and insulting presidential campaigns that living admirers of our system can recall. The candidates were 'packaged' by cynical manipulators of the public's basest fears; 'sound bite zingers' were preferable to intelligent statements of opposition; image took precedence over issues. The presidential debates were neither presidential nor debates but canned Pavlovian 'responses' more often than not having little or nothing to do with the questions. The ground rules for these robotic pavaues were drawn up by glib intellectual misfits who thought so ill of their clients that they refused to allow them to speak beyond *two minutes*! The orators of the cradle that was ancient Athens can be heard vomiting wherever they are.

That paragraph could equally well have been written about elections in the UK or, indeed, in other countries.

The second major effect of the communications explosion upon the educational pattern is, of course, better recognized, but as yet little applied. It is the wealth of technology that is already waiting to be brought to the service of education. Prime Minister Harold Wilson, in setting up the Open University in 1963, wanted the technology of mass communication to be harnessed to serve education. He was thinking primarily of television. Today television is only one of the powerful techniques available. Wilson had been impressed by the use made of TV in the USA for educational instruction in such programs as *Sunrise Semester*.

I was myself less impressed when, a few years later, I studied what was being done in this country. I found that there was a wealth of extremely sophisticated and versatile hardware —including systems of two-way TV link-up - which had cost millions of dollars to develop; but there was an accompanying dearth of software of any quality. No dollars had been spent on that! I saw some of the most sophisticated systems being used to show an inept lecturer writing simple algebra on a blackboard! The dollars were not being spent on the programs; they tended to take a camera into a traditional classroom. One reason for this was that there was — and there still is — a belief that TV can be used as the main medium of instruction. I think that there is already good evidence that this is a fallacy.

TV is a very expensive medium both in money and in the availability of air time. It is a compulsive medium, but I believe its message to be ephemeral — evanescent, if you like — unless it is almost immediately reinforced by reading. I am at odds with Mr. McLuhan - the medium is not the message. The most that can be claimed is that the message can be temporarily reinforced by the medium. In the Open University we use TV economically, sensibly, and, to a considerable degree, effectively, but it is only five per cent of the teaching material.

TV was the technology envisaged by Harold Wilson in 1963; it is now only one of many communication technologies that can be used for education. It has for some years been possible to design systems of individualized self-paced instruction. Each pupil has access to a station in which is placed a complete set of instructional materials; text, tape, film loop, experimental equipment and so on. Following the instructions of a printed program, he proceeds through each lesson in his own time and tests his own comprehension at intervals by a series of built-in self-assessment questions. Should he get stuck, he has, if the system is operating in an instructional setting, access to a tutor. This is actually very much the pattern used by the Open University but when teaching is home-based access to the tutor is necessarily much more limited. I have seen the same system in use at the sixth-form level in an institution in Mexico where it revealed quite staggering differences in the rates at which pupils could progress. Surely there is

a fairly simple lesson here: it is difficult on *academic grounds* to justify the principle of mixed ability classes in the face of such results. There may well be other justifications.

But this is still very simple technology. Nowadays one could provide at each station, for each pupil, a mini-computer and a television screen linked by a modem to a telephone, thus providing two-way video communication with a distant teacher, access to a national computer network, access on demand to the complete contents of a national library and access to a film library. This could all be provided at home; there would be no real *academic* need for anyone to attend school or college or university. There are, of course, powerful reasons why, at least for younger learners, there should be institutionalized learning.

There are lessons to be learned about socializing, about getting on with others, about acknowledging that some others are better, some worse than you in every activity. This will not happen to individuals stuck at home. On the other hand the growing problems of transport, log jams in the cities, shortages of oil and concern about carbon dioxide emissions may make learning at home a necessary if not a wholly desirable pattern in the future.

A third influence on the pattern of education has been the acceleration in the pace of acquisition of new knowledge.

The Pace of Acquisition of New Knowledge

For some years now people in many countries have come to realize that the pace of acquisition of new knowledge is not only very fast but is accelerating. All sorts of figures are quoted to dramatize the situation; as, for example, the calculation that more new information emerged last year than emerged in the whole of recorded history up to 1900. This sort of statement is easy to make and impossible to prove or disprove, but it indicates well enough the dilemma that we face. It follows that the traditional idea of Erasmus that the initial education that children are given can be a preparation — and an adequate preparation — for the whole of their working lives is simply no longer tenable. Much of what they learn at school, college and university will be out of date not just before they retire but even before they finish their initial education. It thus seems sensible to consider whether a period of initial education that averages sixteen years is any longer sensible. Should it not be shortened? Clearly education must continue throughout life to provide the updating and retraining that a modern career will demand, so a very lengthy initial education is less necessary.

In almost every developed country politicians have paid lip service to this need for continuing education, but in very few instances has anything significant been done to provide it. The main reason for this is, of course, that the costs of the initial education program have escalated so much that the idea of adding to them the cost of a program of continuing education, especially if it made use of

conventional techniques of teaching, is unacceptable. The costs of initial education have escalated because of:

1. a growth in the number of children requiring schooling — the 'bulge' in the birth rate;
2. legislation increasing the period of compulsory schooling;
3. an increased voluntary tendency to stay at school for longer and go on to higher education;
4. an increase in the amount of information that is being taught, which follows from the accelerating pace of the acquisition of new knowledge together with a failure to prune out of the curriculum the less necessary elements;
5. an increased complexity of provision, e.g., TV, science and technology, laboratory experience, language laboratories, sophistication of school music, drama and sport provisions, etc;
6. an increased salary bill. (Teachers were underpaid but had rewards of status in the community. The latter has been eroded and led to unionization and large salary demands.)

The high cost of initial education, which inhibits the development by the state of continuing education, leads in turn to one of two conclusions. Either continuing education must be provided by a system that is not a charge on central government funds, by making individuals or employers meet the total costs, or the cost of initial education must be cut to make funds available for continuing education. The second solution has never been tried. In the UK we have so far followed the first of these courses. The result is that, although there is a great deal of continuing education on offer, the system is inchoate; there is multiple provision in some fields and large gaps in others. Furthermore, the system is driven by the profit motive, by the prospect of increasing income either for the individual or for the employer. It bears no necessary relationship to the needs of society or the nation as a whole. This is the reason why it is difficult to meet the new demand for continuing updating to which I referred earlier. It is not anyone's responsibility to pay for it.

The Development of Distance Learning

If we could cut down the cost of initial education, how could we best provide an organized systematic program of continuing education? This brings us to another major change in the pattern of education, namely the development of the concept of distance learning.

Although there have long been commercially-based correspondence colleges which mostly had rather poor records of academic success, it remained broadly

true that, until the Open University came along, it was widely believed in academic circles that the only way to educate anyone was to arrange face-to-face encounters between him and a teacher so that "two minds could rub against each other." This was a charming conceit for the elite of the nineteenth century; it is an intolerably expensive fallacy in the twentieth. It denies the possibility of mass education using the media.

The Open University showed that people who wanted badly enough to be educated could educate themselves, given high quality help through the mass media. The academic world has come to accept, as a matter of reason based on evidence, that this is so; but there is still a considerable emotional resistance to its full acceptance. People believe it in their heads but not in their hearts.

I have already hinted at the economies of scale that lie at the heart of any system of distance learning or indeed of any self-paced individualized instructional system. Teaching materials of quality are very expensive to produce. Consequently they must be used by large numbers of students before the cost per student becomes reasonable. It thus follows, quite inexorably, that the total cost must be large, because there must be lots of students. Everything about a distance learning system must, like everything in Texas, be big. This means that distance learning systems must usually be government-sponsored and may even then be beyond the reach of the governments of small countries.

On the other hand the system has much to commend it, especially when we come to consider programs of continuing education. Let me list some of the reasons:

1. People can stay at work while studying, so that they suffer no loss of income and the country suffers no loss of productivity. No one need pay a maintenance grant.
2. Students can, if they wish, remain anonymous so that they run no danger of being stigmatized by their colleagues should they fail a course.
3. No capital expenditure on residential or teaching accommodation is required.
4. Scarce expert teachers can reach very large audiences.
5. Courses can be kept scrupulously up to date.
6. There can be a nationally accepted qualification for successful completion of the course.
7. Given adequate numbers of students the running costs per student are low (it is not possible for instance to use the system to offer a course in naval architecture).

There are, of course, limits to what distance learning can do. It cannot provide

the sort of apprenticeship training that is needed to acquire manual skills. But in those fields where it can be used, it offers almost the only cheap way of introducing continuing education on a large scale.

The growth of distance-learning systems in the last decade has therefore been very striking. There are now between twenty and thirty Open Universities in almost as many countries of the world, including, for instance, Pakistan, Israel, Thailand, Australia, Germany, Venezuela, the Ivory Coast, and Sri Lanka. They offer very different sorts of courses to their students, ranging from extremely simple instruction on tropical agriculture or health care to recent developments in micro-electronics or computers. They also differ widely in the media used for distributing courses to the students, since the choice must depend upon the communication networks available in the country concerned.

The Shape of Education in the 21st Century

These are, I think, the major changes, the obvious trends that can already be seen in the pattern of education today. Let me now extrapolate and try to paint a picture of the next century.

Primary school and nursery schools in 2050 will still be very local so that pupils can reach them on foot. They will have changed less than any other educational service. Teachers will still work with relatively small groups of children who will learn to read and write and count and who will also learn to co-exist within a group. The biggest change will be in the multitude of electronic learning aids that will be available in the classroom. Very young children will happily use computers to play games and there will be a progressive increase in the complexity of what they do so that logic will become second-nature to them. Art, music and drama will be available by linking into a satellite network. There will be a great deal of project work by pupils.

Secondary schooling will be very different. I see a system where pupils are very largely home-based. Schools will all be residential but pupils will attend them only twice a year, say, for periods of 2 weeks. Thus a school with 200 beds will provide for 2400 pupils. In his residential weeks the pupil will study those parts of his curriculum which cannot be properly studied at a distance. The most obvious examples are the experimental work needed in the sciences and skills such as the use of tools. In addition there would be the supervision not normally available and there would be a real opportunity for discussion with both teachers and other pupils.

At home each pupil would have, as I described before, a personal computer linked by modem to a national collection of teaching material. It will also

provide two-way video connection with a teacher who can be consulted over difficulties that arise. It will, for example, be possible for the pupil studying mathematics to choose from a range of courses, covering the same syllabus, but taught in different styles by different teachers, all of them highly skilled. There would thus be a way for him to find the course that suits him and stimulates him.

I think the results will be astonishing. Children are naturally curious and anxious to learn. The failure of education in many countries is that it switches children off through bad and boring teaching. Mathematics is the classic example. How many people claim they hated it and could not do it! I think that by 2050 almost all kids will find a way to learn and to enjoy mathematics. Furthermore they respond very positively to individualized self-paced learning systems, and I see them completing the current syllabus of secondary schooling in four rather than six years.

But I also see great changes in the syllabus. The system will be providing an enormously wide range of courses and many of them will have become elective. Children will be able to choose within certain constraints the sort of education for which they know they are fitted and which they themselves want.

Currently children are denied acquaintance with the subjects that will most concern them as working adults. How many children learn anything about national or local politics, insurance, house purchase and rental, national economics, trade unions, profits or the stock market? How many become really informed about the great current developments of the globe — developments which change with time, but which, at this point, include genetic engineering, superconductivity, and advances in cosmological understanding?

I see secondary schooling, therefore, finishing at 16, not 18, with a far better educated population of 16 year-olds than our present population of 18 year-olds. The reduction in the duration of secondary education will be very important.

In the USA all children go to school at 6, half of them go on to college, a quarter graduate from college, and one in ten continues into post-graduate education. All this adds up to the fact that, *on average*, the US child spends no less than sixteen years in full-time initial education. Thus *on average*, people take their place in society at 22. (PhD's do not seem to start work until they are virtually middle aged!) In the eighteenth and nineteenth centuries it was not uncommon for some children to graduate from university between the ages of 16 and 18. I am sure that this could still be possible given self-paced learning. In any case the rate of progress through initial education overall could be speeded up, and even a small shortening of the average period would have very significant effects in reducing the total cost.

College education will be a natural continuation of secondary education, taking place very largely in the home. But the electronic networking will be even

more intense. It will be international in scale rather than national. The choice of titles of courses will be extremely large, the choice of different presentations of the same subject material will be equally large. Many courses will be recorded but others will be available live.

The concept of an international network of this kind is already the policy of the University of the World of which I am a governor. It has a global remit; it sees itself as a way of providing top quality higher education to the third world. It also envisages the network providing access to the great libraries of the academic world. College students will be able to complete their first degrees at age 19 or 20.

Our conventional universities will become graduate schools whose two major activities will be the nurture of scholarship and the promotion of research both pure and applied. I see them as institutions that will preserve what is best in our existing universities but free of the burdens of undergraduate teaching. The stimulation that comes from contact with students will not be lost because of the numbers of graduate students who will still be there.

The staff of secondary schools and colleges will have very different jobs from those that they do at present. Their role will be different but no less important. I see both school and college staff as being housed in offices and laboratories located in or near the residential colleges. They will be able to do research or private study and will have access to an excellent academic library. They may, if they wish, take part in constructing new courses for use in the network, and they may play a part in the continuous residential periods for pupils and students. Above all, they will be on the end of a telephone, acting as guide, philosopher and friend to the pupils or students for whom they are responsible. Their days of classroom teaching will be over.

In parallel with all these developments in initial education there will be a vast array of continuing education courses available through the networks. Most of these will be relatively short, lasting only a few weeks. At the academic level there will be refresher and updating courses in recent developments in science and technology on the one hand and in social changes on the other. There will also be available non-academic courses in hobbies, household activities, sports and other leisure activities.

I think that these changes will take place gradually but not too gradually. The investments in cabling, in hardware and above all in software needed to create these networks are very large. They can only happen in quantal steps; in other words any new system must serve a sufficient population to spread the investment costs widely enough to make the cost per pupil an acceptable one.

The Open University could not have started small; if it had tried to do so the cost per student would have been so high that it would have been doomed. It needed a gamble or an act of faith to set it up. We will need similar acts of faith

to create a new system of education. But it will be helped by purely commercial factors. The creation of cable networks has already begun and will grow; and education can make use of them. Much of the hardware will be needed for home banking and home shopping, and education can latch on to it.

But there is no easy way to get the *software*. If it is really top quality, it is very costly. I foresee many political battles before it is available in adequate amounts. It is, of course, here that the international aspect of the networks will be most important. Recorded courses can be shared, with or without modifications, and this greatly reduces costs. Once pupils and students can choose their own courses the jealousy, pride and fear that makes teachers reluctant to use materials provided by someone else will necessarily vanish and access to other people's courses will not be resisted. It may well be that the developing countries, which do not have sophisticated educational systems already in place, will be the first to use the networks — and even to pay for some of the software — because it will be cheaper than trying to create *de novo* a sophisticated traditional system. We shall see. Whatever the problems and difficulties that are encountered — and I do not underestimate them — I think the writing is on the wall. Some at least of my vision will come about.



WALTER PERRY (Lord Perry of Walton)

*Leadership**

I began thinking about leadership when our National Health Service got into such a mess that the government began a series of organizational changes, all of which failed to tackle the real problems. I will return to leadership in medicine a little later, however, because my thinking led me first into looking at my own experience as a University Vice Chancellor (what you would call a University President). I am aware of the differences in structure between your country and mine in terms of university governments, and I naturally will be referring to the British scene which some of you may find a little strange. To make things simpler, let me point out that in the UK, Vice Chancellors are normally drawn from the ranks of the professoriate. There is, unlike in the United States, very little interchange of people between government, industry, and academic life. We have a career structure of university administrators who stay in that line of work throughout their careers and end up as the University Registrar or the University Secretary. Such people very rarely become Vice Chancellors themselves.

The fiscal authority of a typical British university is the Council, composed of usually about 30 people, 20 of them laymen and 10 members of the university staff. There is a Lay Chairman who is usually called the Pro-Chancellor, the Chancellor being a figurehead only, sometimes a Royal having no function save to confer degrees at the graduation ceremonies. The Chairman of the Council, the Pro-Chancellor, is non-executive. The chief executive of the university, as well as the chief academic officer, is the Vice Chancellor. Normally the tone, the morale, the success of any organization depend very largely on the quality of the chief executive at the time. One only has to look at the difference that can be made to a school, for good or ill, by a change in its headmaster or to a university by change in its vice chancellor or to a company by a change in its managing director to see the truth in that generalization.

The university exists primarily to provide services to the students, undergraduate and postgraduate. It is staffed by a multitude of diverse professionals, high quality scholars who depend upon a large variety of craftsmen, technicians, and tradesmen to provide them with the necessary services. It spends a great deal of public money.

I spent thirteen years running the Open University. Within three years of its

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start in 1971, it was one of the very largest United Kingdom universities, with over 60,000 students. It now has, in 1990, nearly 200,000.

Now, I was not a trained administrator. I had been a professor of pharmacology. True, I had done a couple of years as a part-time Dean of the Faculty of Medicine, and another couple of years as a Deputy Vice Chancellor, also very part-time. Furthermore, I do not think I am a particularly good manager. Indeed routine management bores me to tears. All I can claim to have given to the Open University was leadership. How and why I succeeded were the questions that started me thinking about leadership.

To be a successful leader requires, I think, three things above all others. First, it is vital to be able to command the respect and loyalty of your staff. Second, you must be able to formulate and enunciate the policies of your institution in a way that gains and holds the commitment of your staff and indeed of the extramural world, government (who are your paymasters) and the general public (which sends you your students). Third, you must be able to pick the right people to do the jobs that have to be done.

In a university the leader, the Vice Chancellor, is clearly, as chief executive and chief academic officer, responsible to the governing body (the Council) for the health of the whole university. But he has, in the United Kingdom, almost no statutory power. Statutory power is held by the Council on the fiscal side and by the Senate on all academic matters. It was Baldwin who said: "Power without responsibility is the prerogative of the harlot throughout the ages." The Vice Chancellor is the antithesis of the harlot. He has responsibility without power. What he does have is enormous influence. He has to make decisions every day in the absence of any statutory power to make them. He relies on knowing that the decisions will be acceptable to the majority.

One of my colleagues, the Dean of the Faculty of Arts, Professor John Ferguson, wrote a book in 1974 which is called *The Open University from Within*. Some of his colleagues (he was an ordained priest as well as a classics scholar) said it should have been "The Open University from Above." In his book, John Ferguson wrote little vignettes of his senior colleagues. Of me he wrote: "The Vice Chancellor believes in participative democracy, but he believes in it according to his own definition of what it is; namely that he consults everyone and then makes all the decisions himself." That was perceptive and very true.

I do not believe that committees are good at making decisions. I do believe that true leadership means making the decisions that a consensus would arrive at. One can only govern effectively with the consent of the governed. On the other hand the decisions must always be in the best interests of the institution. Thus, occasionally, a leader must make a decision that he knows is not likely to command majority support. He must then set about persuading his colleagues to change their minds, explaining to them why they should do so in the interest of

the institution. Very occasionally he will have great difficulty because he possesses — usually from government — confidential information which he cannot use to persuade and explain. In these circumstances he must rely upon the first vital feature of successful leadership. He must rely on the respect and loyalty of his staff.

In a university there are lots of experts. Each professor was appointed because he was the most distinguished scholar that could be found in his field. The Vice Chancellor, if he is lucky, may be as distinguished in one field of scholarship as the professor in that field, but he cannot be the equal of all the others in theirs. But they will all tend to give loyalty to someone who commands their intellectual respect. Anyone who is not a scholar who becomes a Vice Chancellor has a formidable obstacle to surmount in order to win that loyalty. Most in such circumstances fail. A few remarkable men have succeeded.

In formulating and enunciating the policies of the institution, a leader will freely borrow ideas from his colleagues and will make use of their skills, when they have them, as ambassadors for the university in the extramural world. He will have to accept invitations from the surrounding townships and villages to speak on numerous occasions about his institution and what its aims and policies are, and how it is benefitting the community. In doing this, he will obviously be greatly aided if he is able to speak publicly with conviction and, consequently, to win the sympathy of his audiences. This he can only do if he is, himself, totally committed to the policies he is describing and is possessed, himself, of an excitement and a drive to achieve these purposes.

When one is picking the right person to do the right job — the third vital feature for successful leadership — it is particularly important to see that the tasks one is not oneself good at are entrusted to particularly good subordinates. I said earlier that I was not a good administrator and was bored by routine. At the Open University I was lucky to be able to engage as a University Secretary, head of the administration, an absolutely first-class chap whom I left to get on with doing the routine administration of the institution. I think that in too many organizations — in the United Kingdom at least — there has been a confusion of roles. Leaders have more and more been sought from the ranks of administrators and finance officers. I believe that answering all letters by return of post and balancing the accounts never fired the imagination of staff nor raised their morale in times of trouble. Being a good administrator or accountant is not of itself any guarantee of being able to provide leadership. Many such persons, worthy and skilled as they are, are faceless bureaucrats, grey men with no charisma whatsoever. Perhaps it would be better all around — in all walks of life — if administrative officers and finance officers were still called clerks and bookkeepers; at least these old names described the functions that they were

called on to perform as services to the real leaders of the institution.

Well, that was the net result of my thinking about leadership. When I was faced with commenting in Parliament about the National Health Service, I drew on those conclusions. The first major reorganization of the Health Service had imposed what was known as consensus management on units such as large hospitals. The consensus was to be reached by a small committee consisting of the chairman of the medical staff, the chief nursing officer, the chief administrative officer, and the heads of service departments. They were supposed to meet in order to make decisions. No single person was in charge or in control of the hospital. It was a recipe for disaster. If one person disagreed with a proposed action nothing was done. Yet doing nothing is just as consequential a step as doing something. This remarkable system was defended passionately by all sorts of people, even though they knew that much was wrong with the Health Service. Some said it worked well. I imagine they were working in a team where one member was powerful and imposed his views and became the *de facto* if not the *de jure* decision maker. Others saw any departure from the team approach as a surrender of hard-won power. This was perhaps particularly true of the nursing staff, who had, before this reorganization, very little say in the running of the institutions.

There are many matters on which the voice of these professions, like nursing and the other paramedical professions, should be heard. Such matters as training, salaries, career prospects, and so on. But that does not imply that they should have a voice in all management decisions as a right. When I qualified in medicine in 1943 — before the National Health Service was set up — and worked as an intern in a voluntary hospital, the nursing staff was appallingly paid, accepted terrible conditions of service, a medieval disciplinary code and walked in terror of the matron, but there was never any shortage of nurses. Morale was high, and there was real joy in the work. Clearly conditions of service have improved vastly since then and indeed, under consensus management, nurses have a new source of power. But it did not improve recruitment or help morale.

In 1984, there was a second reorganization based on a formal inquiry carried out by government. The inquiry recommended that each hospital should have a general manager to run it. The suggestion was further made that these managers should be sought and recruited from the business sector — a move very typical of Margaret Thatcher. When I spoke in the House of Lords about the reorganization, I made great play of the analogy with universities. Hospitals, like universities, are multi-professional in their senior staff, they serve primarily patients instead of students, and have the same variety of employees: paramedicals, technicians, caterers, cleaners, and craftsmen to support the medical staff. Everyone in a hospital is working to help the doctor look after the

patient. It follows rationally that the leader of the hospital should be a consulting physician. Only such a person can command, as a right, the respect and loyalty of the staff. It would be a remarkable businessman, brought in as a manager, who could win that loyalty and respect. But there are very few medical persons in general management jobs in British hospitals. The government maintains that consulting physicians do not want to do the job of managing; they would rather stay out of it and look after their patients.

The same has been said of many university professors. They do not want to be vice chancellors; they want to go on teaching and doing research. But there has never been any difficulty in finding and recruiting vice chancellors. Perhaps the fact that vice chancellors are paid very much more than professors, while general managers of hospitals are paid less than the top consultant, is the real answer to this problem. We still have this hospital system in operation, and morale is still very low and recruitment is very difficult. Until the system changes and gives doctors the leadership of the hospitals, I think it will continue to be a depressed service.

I have talked about leadership in universities and in hospitals. But what about leadership at higher levels than that? Let me look, first, at leadership of the National Health Service as a whole, in the entire country, and then, finally, look at leadership of a country itself.

In Britain the National Health Service is a service provided by the Department of Health. The Secretary of State for Health, as a politician and a minister, must do all the things that politicians and ministers have to do. He must fight for funds for his department, battling with both his ministerial colleagues and with the Treasury. Whether or not his fight is successful, he must maintain the political fiction that the National Health Service continues to offer a comprehensive, free health service. He must answer to Parliament for all the criticisms and complaints that arise from the public. Until very recently, he was also responsible for social security, for the whole of the welfare organization. He and his junior colleagues had to answer some five thousand parliamentary questions and reply to thirty thousand letters from members of Parliament each year. He also had to look after his own parliamentary constituency as an elected member of Parliament. He is a member of the Cabinet and has to share in all government policy-making. Then he has to run his department, which at that time had a total staff of ninety-four thousand. How much time can he give to providing leadership to the staff of the National Health Service? David Owen, once Secretary of State himself, said:

The department has become bogged down in detailed administration, touting day-to-day management, that has been sucked in by the parliamentary process. The answerability of ministers to Parliament may have given some

semblance of control, but on some major aspects of health, there has been very little central direction or control.

Thus there is no chance for a Secretary of State to give the kind of leadership that will fire the enthusiasm of the staff of the National Health Service. In any case, can a politician ever give this kind of leadership? Do we not need a professional head of the Health Service, someone who knows the problems? In 1975 I tried to persuade Harold Wilson, then Prime Minister, that the National Health Service should become an agency under its own Director General, separated from the Department of Health. The Secretary of State would still be responsible for determining its budget, but the Director General could say publicly just what he could achieve with the budget. He would not be bound by any political fictions. Not unexpectedly, I failed to persuade Mr. Wilson to make the change. The same government inquiry which had led to the second reorganization of the National Health Service that I mentioned before did recognize that there was a problem in leadership at the top of the Service. They recommended the appointment of a National Health Service Management Board with a full-time chairman.

This new job was advertised, and when I read the advertisement in the press, I was outraged. It said, "no one need apply who has not had experience of running an organization with an annual revenue of several hundred million pounds." No doctor could qualify. Applicants were to apply to one of these management consultant agencies which were to screen the applicants before putting names forward for consideration.

Since then, there have been three holders of the post. All three were industrialists. Two of them I knew quite well, and they were both able, dedicated managers. For all their efforts, they have failed to make any impact on the morale of the Service. I do not believe that any of them could. The job will provide leadership only if the holder has the qualities described. He must command the respect and loyalty of the staff. And the only person who could start off with a reasonable chance of commanding this loyalty and respect would be a medical person of great distinction. I do not accept that the profession is devoid of distinguished members who could also run the Service as well as anyone drawn from the business world. He would be able to formulate and enunciate the policies of the Service in ways that the professionals would understand and could respond to, in a way that they do not respond to the current managers. He could also employ the right staff to do all the administrative and accounting tasks just as efficiently as the current managers do.

The whole Service is at this very moment extremely depressed. Morale is very low. Recruitment is becoming increasingly difficult. The present government is encouraging private medicine, and those who can afford it are going there to

obtain services. It is extremely sad, because the National Health Service in its early years was seen by almost everyone who worked in it, as well as by nearly all the public, as one of the great glories of the welfare state, a model for the rest of the world. It really did eliminate the economic fears of being ill.

Finally, let me say a word about national leadership. I think that among politicians, qualities of leadership are every bit as rarely found as they are in any other walk of life. Roosevelt was a leader. He formulated and enunciated the policies of the New Deal and won the loyalty and respect of the majority of the electorate. Churchill was a successful leader. He, more than anyone, was able to give expression to the goals of the nation and to raise and invigorate the spirit of the people. But after them, have we seen many signs of leadership in our other national leaders? Some might say MacMillan and Thatcher in my country. Some might quote Truman and Kennedy in yours. But even they were pale shadows of Roosevelt and Churchill. And the others were nowhere at all.

Furthermore, when I look around in Britain for alternative leaders, I see little to hope for. Maybe our democratic systems discourage natural leaders from emerging. It certainly seems to me that in those walks of life in which I have spent time in Britain, namely medicine, science and education, no one of quality would dream of going into national politics. They would regard standing for election to the House of Commons as the ultimate abrogation of human dignity. They are, of course, wrong. Politics desperately needs the able from all walks of life. That is where the leaders would be found. But I don't know how we can produce a change of that sort in our national life.



